

What is claimed is:

1 1. A method of improving navigation of content in a user interface that has been rendered in
2 a content aggregation framework, comprising steps of:

3 detecting, on a navigable element of an input document encoded in a markup language, an
4 indication that a navigation stop should occur at this element in a determined navigation order;

5 programmatically determining, responsive to detecting the indication, the navigation order
6 in which the navigation stop at the element should occur; and

7 programmatically modifying the navigable element from the input document to specify the
8 programmatically determined navigation order.

9 2. The method according to Claim 1, wherein the detecting, programmatically determining,
10 and programmatically modifying steps operate on indications of more than one navigable element
11 in the input document.

12 3. The method according to Claim 2, further comprising the step of rendering an output
13 document which results from the programmatically modifying step, wherein the rendered output
14 document is navigable in the programmatically determined navigation order.

15 4. The method according to Claim 2, further comprising the step of aggregating a plurality of
16 input documents encoded in the markup language, thereby creating an aggregated document,
17 wherein more than one of the input documents specifies navigation stops on navigable elements,
18 and wherein the programmatically determining and programmatically modifying steps are

5 performed for each of the input documents during the aggregating step.

1 5. The method according to Claim 4, further comprising the step of rendering the aggregated
2 document, wherein the rendered aggregated document is navigable in the programmatically
3 determined navigation order.

1 6. The method according to Claim 1, wherein the markup language is HTML ("Hypertext
2 Markup Language").

1 7. The method according to Claim 4, wherein the markup language is XML ("Extensible
2 Markup Language").

1 8. The method according to Claim 1, wherein the input document is a JavaServer Page
2 specification.

1 9. The method according to Claim 8, wherein the programmatically modifying step modifies
2 a document created by programmatically evaluating the JavaServer Page specification.

1 10. The method according to Claim 1, wherein the input document is a portlet specification.

1 11. The method according to Claim 10, wherein the programmatically modifying step modifies
2 a document created by programmatically evaluating the portlet specification.

1 12. The method according to Claim 1, wherein the programmatically modifying step further
2 comprises evaluating the input document according to a style sheet.

1 13. The method according to Claim 12, wherein the style sheet is encoded in XSL
2 ("Extensible Stylesheet Language").

1 14. The method according to Claim 1, wherein the indication comprises a reference to
2 executable code and supplies an identification of a region into which the navigable element is to
3 be rendered.

1 15. The method according to Claim 14, wherein the indication further comprises an offset
2 value within the region.

1 16. The method according to Claim 1, wherein the indication is specified as a value of a
2 TABINDEX attribute.

1 17. The method according to Claim 16, wherein the indication comprises a reference to
2 executable code and supplies an identification of a region into which the navigable element is to
3 be rendered, and wherein the programmatically modifying step replaces the reference and region
4 identification with a numeric value that specifies the programmatically determined navigation
5 order.

1 18. The method according to Claim 16, wherein the indication comprises a reference to
2 executable code and supplies an identification of a region into which the navigable element is to
3 be rendered as well as an offset within the region, and wherein the programmatically modifying
4 step replaces the reference, region identification, and offset with a numeric value that specifies the
5 programmatically determined navigation order.

1 19. A method of dynamically specifying a visitation order for navigable elements in a user
2 interface that has been rendered in a content aggregation framework, comprising steps of:

3 aggregating a plurality of input documents encoded in a markup language, wherein more
4 than one of the input documents specifies navigation stops on navigable elements

5 detecting, on one or more navigable elements of the input documents during the
6 aggregation, an indication that a navigation stop should occur at the respective element in a
7 determined navigation order;

8 programmatically determining, responsive to detecting the indication, the navigation order
9 in which the navigation stop at the respective element should occur;

10 programmatically modifying the navigable element to specify the programmatically
11 determined navigation order; and

12 rendering an output document which results from the programmatically modifying step,
13 wherein the rendered output document is navigable in the programmatically determined navigation
14 order.

1 20. A system for improving navigation of content in a user interface that has been rendered in

2 a content aggregation framework, comprising:

3 means for detecting, on a navigable element of an input document encoded in a markup
4 language, an indication that a navigation stop should occur at this element in a determined
5 navigation order;

6 means for programmatically determining, responsive to detecting the indication, the
7 navigation order in which the navigation stop at the element should occur; and

8 means for programmatically modifying the navigable element from the input document to
9 specify the programmatically determined navigation order.

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21. A computer program product for improving navigation of content in a user interface that
has been rendered in a content aggregation framework, the computer program product embodied
on one or more computer-usable media and comprising:

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